

Application No.: 10/580,882
Filing Date: May 26, 2006

REMARKS

With this amendment, claim 1 has been amended. Support is found in canceled claim 2. Claim 3 has been amended consistent with claim 1. No new matter is added. Applicant respectfully requests the entry of the amendments and reconsideration of the application in view of the amendments and the following remarks.

Rejoinder

The Office Action states that claims 10 and 11, which were added with the previous response, are directed to a non-elected invention. However, claims 10 and 11 are method claims depending upon the composition claim 1. Claim 1 is believed to be allowable. Accordingly, rejoinder of claims 10 and 11 is respectfully requested.

Double patenting

Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5 and 6 of copending Application no. 12/305,356 ('356) in view of Ishida, et al. (EP 1147764) and Torihara, et al. (JP 07-002643).

Compounds of canceled claim 2 have been incorporated into claim 1. Claim 2 is not subject to this ground of rejection. Accordingly, the double patenting rejection is believed to be addressed by the amendment.

In view of Applicants' amendment, withdrawal of the rejection is respectfully requested.

Rejection under 35 U.S.C. § 103(a)

Claims 1-4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida, et al. (EP 1147764 A2) in view of Torihara, et al. (JP 07-002643).

Ishida, et al. teach cosmetic compositions comprising polymethoxyflavone having *at least 4 methoxy groups* (see Abstract, and paragraph 0007 on pages 2-3 of Ishida, et al., especially last two lines). In contrast, the three polymethoxyflavone compounds of the presently claimed invention have *3 methoxy groups*. Accordingly, the claimed compounds are chemically distinct from the compounds of Ishida, et al.

This deficiency is not corrected by Torihara, et al. Torihara, et al. do not teach polymethoxyflavone compounds but are cited for their teaching on 4-n-butyl-resorcinol. Accordingly, the combination of references does not teach all of the elements of the claimed invention.

Furthermore, the polymethoxyflavone compounds of the claimed invention are not obvious over the polymethoxyflavone compounds of Ishida, et al. as the compounds of the present invention have a different and unexpected effect compared to the compounds of Ishida, et al. As shown in Table 1 of Ishida, et al. on page 8, some of the compounds of Ishida, et al., including Compound III which is used in Examples 1, 3-5, and 7-11 of Ishida, et al., inhibit melanin production. However, Ishida, et al. does not teach any compound that inhibits length of dendrites.

As shown in items 2-4 of the attached 2nd Declaration of Akihiro Tada (2nd Tada Declaration), Nobiletin, which corresponds to Compound III of Ishida, et al. and is used in Examples 1, 3-5, and 7-11 of Ishida, et al., has no significant effect on dendrite length over a concentration range of 10^{-6} % to 10^{-4} %. In contrast, centaureidin, according to the claimed invention, has a dramatic inhibitory effect on dendrite length. Centaureidin corresponds to "5,7-dihydroxy-3,6-dimethoxy-2-(5-hydroxy-4-methoxyphenyl)-4H-1-benzopyran-4-one" of claim 1 as amended and is also referred to as "compound 1" in the instant specification. Note that "5,7-dihydroxy-3,6,8-trimethoxy-2-(3,4,5-trihydroxyphenyl)-4H-1-benzopyran-4-one, and 3,5-diethoxy-6,7-dimethoxy-2-(5-ethoxy-4-methoxyphenyl)-4H-1-benzopyran-4-one" (amended claim 1) also demonstrate this inhibitory effect on dendrite length as demonstrated in Test Example 1 at pages 27-28 of the present specification. Accordingly, the effect is not limited to centaureidin but encompasses the entire scope of the present claims. In view of the structural similarity between the claimed compounds and compound III of Ishida, et al., this dramatically different effect was unexpected.

Furthermore, the claimed compositions unexpectedly inhibit cell death when combined in the concentration ranges as claimed (see item 5 of the 2nd Tada Declaration). As discussed in the 2nd Tada Declaration referring to page 29, Table 5 of the present specification, while cell death increases as concentration of 4-n-butyl resorcinol increases in the absence of centaureidin, the presence of centaureidin protects cells from the cytotoxic effects of 4-n-butyl resorcinol in the

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claimed concentration ranges. This effect also was unexpected. Both Ishida, et al. and Torihara, et al. teach broad concentration ranges, not the specific concentration ranges claimed by Applicants in which protection from cytotoxic effects is obtained.

Accordingly, both the specific structures (having 3 methoxy groups) and the claimed concentration range for the recited compounds are critical to the claimed invention and are nonobvious and unexpected in view of the teaching of the prior art.

In view of Applicants' amendments and arguments, reconsideration and withdrawal of the above ground of rejection is respectfully requested.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Co-Pending Applications of Assignee

The Examiner is referred to the listing provided with the response of August 19, 2009.

CONCLUSION

In view of Applicants' amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: Jul. 22, 2010

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